1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

elaborate, as they require fuses of various speeds, different colors of fire, and slow-burning types of powder. As handbooks exist for this type of manufacture and supply houses also furnish information to their patrons, it was felt that detailed inquiry into techniques was not worth while. The *cohetero* usually receives a small advance payment—5 to 15 pesos—when he accepts an order. He receives no further payment until the *castillo* is burned. Should there be a failure, not only may the *cohetero* fail to receive his pay, but he may be jailed and fined.

Stonecutting.—Several men do stonecutting on a part-time basis. Doorsills and bases for door posts and pillars are the major products, although some men also make grinding stones for *nixtamal* mills. A fine-grained gray lava from the barranca north of town is the most-used material. Tools include an iron-headed hammer, weighing about 2 pounds, steel chisels, and a pair of calipers. Stones for the *nixtamal* mills are made in pairs and are about a foot in diameter and 6 to 8 inches thick. About 3 days are required to make a pair.

Tanning.—The only full-time tanner of hides in Cherán is a native of Aranza, who moved to Cherán because of the better water supply. He has a house and lot on the east side of town beside the aqueduct. Most of his work is done on hides brought him by shoemakers and *guarache* makers. Such work is charged for on a fee basis.

A man and his uncle also tan hides on a part-time basis. They are primarily farmers and do relatively little of the tanning in Cherán.

Cowhides are tanned with oak bark. The process takes 20 to 30 days, mostly occupied with soaking the hides in the tanning mixture. Sheepskins, used for inner soles of shoes, must be put through a lye bath, scraped, and then soaked with oak bark. A batch of five or six sheepskins requires 2 days' labor and about 8 days' soaking.

The principal equipment consists of a number of large hollow logs for soaking the hides.

Lacquer.—One woman learned lacquer making in Uruapan. She works fairly steadily, producing a typical Uruapan black-background lacquer with floral designs in four or five colors. She sells all her product in Cherán.

[Text continues on page 46a]

Production:

333 Less than 1 meter to nearly 2 meters a day

433 *Price:*

434 From 80 centavos a meter to $1.25; about $1 a meter seemed most common

[435] *Average returns:*

From 80 centavos to $1.50 seems common

Comment: Essentially the mason's wage is clear profit. Replacement of tools is undoubtedly a minor factor. Attractive as the wage is, a mason is idle much of the time. It is doubtful if masons earn enough to live on without also farming or working as laborers. Some masons are also butchers, plasterers, or *tejamanil* makers.

Stonecutting:

324 *Tools:*

433 2-pound iron mallet

434 Chisels

Calipers (value unknown)

Labor:

Nixtamal grinding stones (pair)	3 days
Door bases (pair)	1 week

Sales price (gross profit):

[435]

Nixtamal grinding stones (pair)	$9
Door bases and sills (each)	10

Comment: The figures suggest a $3 a day gross income, but stonecutters work only to order and do not work regularly.

TEXTILE MANUFACTURE

295 *Tule mats:*

433 *Costs:*

434

Tules at Erongaricuaro, per bundle	$0.25
Rent of burro, 3 days	1.00
Total cost of 10 bundles of tules (1 burro load)	3.50

Labor:

	Days
Getting tules	3
Weaving 13 mats	6½
Selling mats	2½–3
Average total time	12

[435]

Sales price at 60 centavos each	$7.80
Gross profit	4.30
Daily profit per worker	.35 plus

Comment: Except for one woman, mat making is a side line and only one a day is woven. The figures given above represent the single case where a woman spends all her time at mat weaving. Actually, this woman has a slightly higher income, as her mother buys the tules. On the other hand, two people are supported by the work, for the weaver has to rely on the mother to perform most of the household duties.

339 In some towns, dried pine needles ("*huinomo*"), wheat, or oat straw are used in place of manure.
[192] In the Sierra, adobes are called adóbi; in Ihuatzio, on Lake Pátzcuaro, iaurukata.

STONE

316 Masonry is made of assorted-sized rocks brought
333 from a quarry in the west side of the cinder cone on the northwest edge of town. The stone is a porous soft reddish lava, easily broken or dressed roughly with a hammer. It is carried from the
[497] quarry on burros. The rocks are used for all types of masonry walls. Usually large sizes are employed near the bottom and to make the external faces of the wall; smaller stones are used to fill up the spaces, and usually all external surfaces are filled with small stone spalls set in the mud mortar.

346 Large stones used for foundations are a hard gray lava from the arroyo north of town or from the slopes of a cinder cone northeast of town.
[324] The same rock is employed for finished pieces of

[continued on p. 106]

TYPES OF STRUCTURES
WOODEN STRUCTURES

343 Three main kinds of wooden structures are built. These are the "*troje*," or house (trója; in Angahuan, *tarímba*), really a storehouse in use, the kitchen (kosína), and sheds used for storing
[335] fodder or sheltering animals. Normally, a master carpenter is employed; he usually works for an agreed price and hires a helper.

The "*troje*" is a rectangular structure, nearly square, consisting of one room with a loft over it (fig. 3; pl. 2, upper). The door is always in one of the long walls and there is usually an overhang of the roof, supported on pillars, forming a veranda on this side. Usually the flooring of the first floor is extended to form a floor for the veranda (fig. 3; pl. 4, lower, left).

343 The "*troje*," or house, is elevated on large stones
335 (or stone pillars in some towns), usually 9 in number, one at each corner, one in the middle of each side, and one at the center of the floor. Upon the stones go four interlocking foundation beams, "*polines*" [3] (pʃéekua), and a crosspiece destined to support the middle of the floor, the "*atravesaño de*

[continued bottom page 106]

[3] Also "*puntas*," because they are usually made of heartwood (*tatsi*).

324 stone work used as doorjambs, door corners, and bases for the pillars of verandas where these rest on the ground.

TILE AND BRICK

339 Tile and brick are little used. Some tile roofs are seen and tiles are sometimes laid over a shake roof when the latter is worn out. Both tile and [317] brick are made from clay occuring near the town. The dry clay is brought to town on burros. The manufacture is carried on in an old chapel, and firing is in a kiln, both located in the church compound. The quality is poor and the demand is small.

MISCELLANEOUS

353 Adobe-and-masonry walls are commonly fin-
439 ished on the inside and, less frequently, on the
[338] outside, with a coat of sand and lime plaster. This material is always imported. So, too, are the pigments used in whitewash or kalsomine finishes employed to decorate plastered walls.

TYPES OF
STRUCTURES

343

Figure 3.—Old "troje" in Cherán, said to have been built before the Revolution.

343 *la* [illegible] *a*" (uanajɛ̨ukua). The foundation beams
335 are square, from a third to a fourth of a *vara* (about 8 to 10 inches) in cross section, but the crosspiece is thinner by the thickness of the floor boards.

The two longest foundation beams and the

[p. 10 b]

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 91-a]

325 old smiths, who work at their trade only part time, represented the remnant of a once thriving home industry.

[439] The former source of metal for the San Felipe smiths is problematical. According to a local informant, during the 1880's "*planchas de hierro*" were brought in from Cotija, a muleteer and trade center having close connections with the *tierra caliente* and the Sierra of Guerrero. This information points to Coalcomán in the Sierra Madre del Sur of Guerrero as the principal source of iron. Other ironworking towns of Michoacán include Irimbo and Nahuatzen. Mestizos in the latter pueblo fashion knives and machetes.

STONECUTTING

324 [438] Stonework among modern Tarascans is limited to approximately 12 metate makers in Turícuaro. Formerly this village was noted throughout Michoacán for the high-quality *metates* (iauáɾi), *manos* (poɾékua), and *molcajetes* (šúmatakua) carved from a fine-grained andesite (ɬakápu amákiti, or "good stone"), found near the summit of the composite volcano Kanákuaráni (Cerro de la Corona) nearby. Since the introduction (ca. [256] 1925) of the engine-powered nixtamal mills in mestizo and larger indigenous towns, demand for new *metates* has sharply declined.[141]

Metates and *molcajetes* are roughly shaped at the quarry on Kanákuaráni and are carried down to the pueblo on burro for finishing in the stonecutter's house. Stone is worked with steel tools, [412] e. g. the pick (píkua) and sledge hammer (píkua-k'éri), and is finished with a polishing stone (janámu). Several sizes of *metates* are made and sold to traveling merchants who pass through the town.

TRADE AND TRANSPORT

438 441 The structure of trade among the Tarascans is not dissimilar to that of most Indian groups of central Mexico. Although every settlement has at least one store where general merchandise can be purchased, most trading is done at the *tianguis*, or market, held regularly in the larger towns. Throughout the area professional traders—*huacaleros* (who carry merchandise on their backs), *arrieros* (who haul products on the backs of burros), and lately, wholesale buyers from the

[141] According to local informants, in 1913 practically every family in the village made metates. Since that time most of the villagers have turned to woodwork (mainly bateas).